

**AMENDMENTS TO THE SPECIFICATION:**

Kindly replace the paragraph beginning at page 1, line 5 with the following amended paragraph:

[[Such]] A thin-film magnetic head has a coil wound around a yoke that is magnetically coupled with two magnetic poles separated [[with]] from each other by a recording gap and performs write [[operation]] operations of magnetic information by following a write current through the coil.

Kindly replace the paragraph bridging pages 1 and 2 with the following amended paragraph:

The write current applied to the coil is in general rectangular wave shape pulses. Wave shape and magnitude of current actually flowing through the coil, when the rectangular wave shape pulses are applied, vary depending upon the structure of the thin-film magnetic head, upon an output impedance of a current source connected with the coil, and upon a frequency and a voltage of the applied rectangular wave pulses. These are affected also by a characteristic impedance of trace conductors and connection lines between the current source and the magnetic head. Particularly, ~~in case that~~ when the influence of the trace conductor is eliminated by fixing the frequency and the current of the applied pulses, this variation in the wave shape of the current is caused by non-linearity of the input impedance of the coil.

Kindly replace the paragraph beginning at page 2, line 3, with the following amended paragraph:

If the wave shape of the current flowing through the inductive write head element of the thin-film magnetic head is deformed, magnetic ~~pattern~~ patterns written in a magnetic medium will become distorted and thus write and read operations of data will become difficult. Also, in order to improve the non-linear transition shift (NLTS) in dynamic characteristics, it is necessary to shorten a rising time of the wave shape of the current flowing through the coil.

Kindly replace the paragraph beginning at page 2, line 11, with the following amended paragraph:

Therefore, ~~required~~ requirements for the wave shape of the current flowing through the coil are (1) to maintain a profile of the rectangular wave shape pulses provided from the current source as much as possible, (2) to have a short rising time, and (3) to have a high current value ~~[[with]]~~ while holding the rectangular wave shape in order to obtain a strong write magnetic field.

Kindly replace the paragraph bridging pages 7 and 8 with the following amended paragraph:

In these figures, reference numeral 10 denotes the coil conductor, made of an electrically conductive material such as copper for example, in a write head element of the thin-film magnetic head, 11 and 12 denote lower and upper yoke layers made of a ferromagnetic material such as permalloy and provided with at its top ends first and second magnetic poles ~~[[faced]]~~ facing each other via an insulation gap and rear

ends magnetically coupled with each other, and 13 denotes trace conductors, made of an electrically conductive material such as copper for example, respectively connected to both ends of the coil conductor 10. The coil conductor 10 is illustrated in the figures to have a plurality of turns each wound in a rectangular shape. However, the coil conductor 10 will be actually wound in a curved shape such as a circular shape or an ellipse shape.

Kindly replace the paragraph bridging pages 8 and 9, with the following amended paragraph:

The coil conductor 10 has a structure formed by bending a plurality of single layer turns (i.e., individual turns) into an angle of 180 degrees along a line disposed behind the lower and upper yoke layers 11 and 12, and by folding the bent turns above the upper yoke layer 12. More concretely, each turn of the coil conductor 10 consists of a first section 10a, a second section 10b with one end coupled to one end of the first section 10a, and a third section 10c with one end coupled to the other end of the second section 10b. The first section 10a ~~travels to pass~~ passes between the lower and upper yoke layers 11 and 12 in parallel with their surfaces, ~~to extend~~ extends over the yoke layers 11 and 12 along the ABS of the thin-film magnetic head, and then ~~to make~~ makes a turn in a direction perpendicular to the ABS so as to separate there from. The second section 10b travels in a direction perpendicular to the yoke surfaces in a rearward position of the yoke layers 11 and 12 to constitute a folding back portion. The third section 10c ~~travels to pass~~ passes above the upper yoke layer 12 in parallel with its surface, ~~to extend~~ extends over the yoke layer 12 along the ABS, and then ~~to make~~ makes a turn in a direction perpendicular to the

ABS so as to approach it. The ABS of the magnetic head is, as well known, in substantially the same plane as top end surfaces 11a and 12a of the lower and upper yoke layers 11 and 12.

Kindly replace the paragraph beginning at page 9, line 10, with the following amended paragraph:

In this embodiment, the second sections 10b of the turns of the coil conductor 10 are linearly arranged in the rearward position of the yoke layers 11 and 12, ~~[[with]]~~ while keeping the same space from the ABS.

Kindly replace the paragraph bridging pages 10 and 11, with the following amended paragraph:

Therefore, an inductance of the coil conductor 10 can be reduced, that is, a frequency of the peak input impedance of the coil conductor 10 can be shifted to a higher frequency, ~~[[with]]~~ while keeping the same magnetic path length of the lower and upper yoke layers 11 and 12. As a result, it is possible to flow a write current having a short rising time and a high current value through the coil conductor 10 ~~[[with]]~~ while maintaining a profile of rectangular wave shape input pulses as much as possible. Due to the short rising time, correct writing operations can be expected even if the write frequency is high as 300 MHz for example. Because the characteristic impedance of trace conductors electrically connected to the coil conductor 10 can be lowered by the corresponding amount of the reduced input impedance of the coil conductor 10, the width of the trace conductors can be increased to heighten thermal dissipation performance of the trace conductors.

Kindly replace the paragraph beginning at page 12, line 1, with the following amended paragraph:

In this embodiment, as is mentioned, the second sections 10b' or the folding back portion of turns of the coil conductor 10' are arranged ~~[[to]]~~ partially close to the ABS. Thus, the length of the coil conductor itself is shortened and the size of the coil conductor is also reduced ~~resulting~~ causing its inductance to decrease. This embodiment can certainly provide the same advantages and modifications as the embodiment of Fig. 1.